

## SeaBASS STANDARD FIELD NAMES AND UNITS

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<http://seabass.gsfc.nasa.gov/cgi-bin/stdfields.cgi>

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ABBREVIATION	UNITS	DESCRIPTION
a	1/m	Total absorption coefficient (aw + ap + ag)
aaer	1/m	Absorption coefficient of atmospheric aerosols
ad	1/m	Absorption coefficient of non-algal detritus
adg	1/m	Absorption coefficient of non-algal detritus + Gelbstoff (ad + ag)
ag	1/m	Absorption coefficient of Gelbstoff
agp	1/m	Absorption coefficient of Gelbstoff + particles (ag + ap)
Allo	mg/m <sup>3</sup>	HPLC Alloxanthin
altitude	m	Altitude above sea level
am	unitless	Airmass
angstrom	unitless	Angstrom exponent
Anth	mg/m <sup>3</sup>	HPLC Antheraxanthin
AOT	unitless	Aerosol optical thickness
ap	1/m	Absorption coefficient of particles (ad + aph)
aph	1/m	Absorption coefficient of phytoplankton
a*ph	m <sup>2</sup> /mg	Chlorophyll a specific absorption coefficient
Asta	mg/m <sup>3</sup>	HPLC Astaxanthin
At	degreesC	Air temperature
aw	1/m	Absorption coefficient of water
b	1/m	Total scattering coefficient (bw + bp)
bb	1/m	Total backscattering coefficient (bbw + bbp)
bbp	1/m	Backscattering coefficient of particles
bbw	1/m	Backscattering coefficient of water
beta-beta-Car	mg/m <sup>3</sup>	HPLC Beta-Carotene (Beta,beta-Carotene)
beta-epi-Car	mg/m <sup>3</sup>	HPLC Alpha-Carotene (Beta,epsilon-Carotene)
beta-psi-Car	mg/m <sup>3</sup>	HPLC Gamma-Carotene (Beta,psi-Carotene)
bin_depth	m	Nominal or center depth for each data bin
bincount	none	Number of records averaged into a bin
bp	1/m	Scattering coefficient of particles
BSi	mmol/m <sup>3</sup>	Biogenic silica
But-fuco	mg/m <sup>3</sup>	HPLC 19'-Butaonyloxyfucoxanthin
bw	1/m	Scattering coefficient of water
c	1/m	Beam attenuation coefficient
Cantha	mg/m <sup>3</sup>	HPLC Canthaxanthin
Cdmf	uW/cm <sup>2</sup> /nm/sr	CDOM fluorescence (please use the form cdmf_ex####_em####; Ex = excitation wavelength; em = emission wavelength)
CHL	mg/m <sup>3</sup>	Fluorometrically/spectrophotometrically-derived chlorophyll a

Chl_a	mg/m <sup>3</sup>	HPLC Chlorophyll a
Chl_a_allom	mg/m <sup>3</sup>	HPLC Chlorophyll a allomers
Chl_a_prime	mg/m <sup>3</sup>	HPLC Chlorophyll a epimer
Chl_b	mg/m <sup>3</sup>	HPLC Chlorophyll b
Chl_c	mg/m <sup>3</sup>	HPLC Chlorophyll c
Chl_c1	mg/m <sup>3</sup>	HPLC Chlorophyll c1
Chl_c1c2	mg/m <sup>3</sup>	HPLC Chlorophyll c1,c2
Chl_c2	mg/m <sup>3</sup>	HPLC Chlorophyll c2
Chl_c3	mg/m <sup>3</sup>	HPLC Chlorophyll c3
Chlide_a	mg/m <sup>3</sup>	HPLC Chlorophyllide a
Chlide_b	mg/m <sup>3</sup>	HPLC Chlorophyllide b
cloud	%	Percent cloud cover
cnw	1/m	Beam attenuation coefficient with water subtracted (c - cw)
cond	mmho/cm	Conductivity
cp	1/m	Beam attenuation coefficient of particles (ap + cp)
Croco	mg/m <sup>3</sup>	HPLC Crocoxanthin
cw	1/m	Beam attenuation coefficient of water (aw + bw)
date	yyyymmdd	Sample date
day	dd	Sample day
depth	m	Depth of measurement
Diadchr	mg/m <sup>3</sup>	HPLC Diadinochrome
Diadino	mg/m <sup>3</sup>	HPLC Diadinoxanthin
Diato	mg/m <sup>3</sup>	HPLC Diatoxanthin
DIC	umol/kg	Dissolved inorganic carbon
Dino	mg/m <sup>3</sup>	HPLC Dincoxanthin
DOC	umol/kg	Dissolved organic carbon
DV_ChI_a	mg/m <sup>3</sup>	HPLC Divinyl Chorophyll a
DV_ChI_b	mg/m <sup>3</sup>	HPLC Divinyl Chorophyll b
Echin	mg/m <sup>3</sup>	HPLC Echinenone
Ed	uW/cm <sup>2</sup> /nm	Downwelling irradiance
EdGND	volts	Dark current values for Ed sensor
Elw	uW/cm <sup>2</sup>	Downwelling irradiance over the infrared spectrum, 3 to 40 um
Epar	uE/cm <sup>2</sup> /s	Profiled PAR
epi-epi-Car	mg/m <sup>3</sup>	HPLC Epsilon-Carotene (Epsilon,epsilon-Carotene)
Es	uW/cm <sup>2</sup> /nm	Downwelling surface irradiance
EsGND	volts	Dark current values for Es sensor
Esky	uW/cm <sup>2</sup> /nm	Downwelling sky irradiance
Esun	uW/cm <sup>2</sup> /nm	Downwelling sun irradiance (direct normal solar irradiance)
Esw	uW/cm <sup>2</sup>	Downwelling irradiance over the solar spectrum, 0.3 to 3 um
Et-8-carot	mg/m <sup>3</sup>	HPLC Ethyl-apo-8'-carotene
Et-chlide_a	mg/m <sup>3</sup>	HPLC Ethyl Chlorophyllide a
Et-chlide_b	mg/m <sup>3</sup>	HPLC Ethyl Chlorophyllide b

Eu	uW/cm <sup>2</sup> /nm	Upwelling irradiance
EuGND	volts	Dark current values for Eu sensor
F0	uW/cm <sup>2</sup> /nm	Extraterrestrial solar irradiance
Fuco	mg/m <sup>3</sup>	HPLC Fucoxanthin
Hex-fuco	mg/m <sup>3</sup>	HPLC 19'-Hexanoyloxyfucoxanthin
hour	hh	Sample hour
It	degreesC	Instrument temperature
jd	jjj	Sequential day of year
Kd	1/m	Diffuse attenuation coefficient of Ed
Kl	1/m	Diffuse attenuation coefficient of Lu
Knf	1/m	Diffuse attenuation coefficient of natf
Kpar	1/m	Diffuse attenuation coefficient of PAR
Ku	1/m	Diffuse attenuation coefficient of Eu
lat	degrees	Sample latitude
lon	degrees	Sample longitude
LSi	mmol/m <sup>3</sup>	Lithogenic silica
Lsky	uW/cm <sup>2</sup> /nm/sr	Sky radiance
Lt	uW/cm <sup>2</sup> /nm/sr	Total water radiance
Lu	uW/cm <sup>2</sup> /nm/sr	Upwelling radiance
LuGND	volts	Dark current values for Lu sensor
Lut	mg/m <sup>3</sup>	HPLC Lutein
Lw	uW/cm <sup>2</sup> /nm/sr	Water leaving radiance
Lwn	uW/cm <sup>2</sup> /nm/sr	Normalized water leaving radiance ( $Lwn = Lw * F0 / Es$ )
Lwnex	uW/cm <sup>2</sup> /nm/sr	Exact normalized water leaving radiance ( Morel et al. 2002 )
Lyco	mg/m <sup>3</sup>	HPLC Lycopene
Me-chlide_a	mg/m <sup>3</sup>	HPLC Methyl Chlorophyllide a
Me-chlide_b	mg/m <sup>3</sup>	HPLC Methyl Chlorophyllide b
Mg_DVP	mg/m <sup>3</sup>	HPLC Mg 2,4 divinyl pheoporphyrin a5 monomethyl ester
minute	mn	Sample minute
Monado	mg/m <sup>3</sup>	HPLC Monadoxanthin
month	mo	Sample month
MV_Ch1_a	mg/m <sup>3</sup>	HPLC Monovinyl Chorophyll a
MV_Ch1_b	mg/m <sup>3</sup>	HPLC Monovinyl Chorophyll b
natf	nE/m <sup>2</sup> /sr/s	natural fluorescence of chlorophyll a
Neo	mg/m <sup>3</sup>	HPLC Neoxanthin
NO2	mmol/m <sup>3</sup>	Nitrite
NO3	mmol/m <sup>3</sup>	Nitrate
nrb	photoelectrons/usec/shot	Normalized relative backscatter
oxygen	ml/L	Dissolved oxygen
Oz	dobson	Column Ozone
P-457	mg/m <sup>3</sup>	HPLC P-457
PAR	uE/cm <sup>2</sup> /s	PAR measured at the sea surface

pCO2	uatm	Surface water partial pressure of carbon dioxide
Perid	mg/m <sup>3</sup>	HPLC Peridinin
PHAEO	mg/m <sup>3</sup>	Total phaeopigment concentration
Phide_a	mg/m <sup>3</sup>	HPLC Pheophorbide a
Phide_b	mg/m <sup>3</sup>	HPLC Pheophorbide b
Phide_c	mg/m <sup>3</sup>	HPLC Pheophorbide c
Phytin_a	mg/m <sup>3</sup>	HPLC Pheophytin a
Phytin_b	mg/m <sup>3</sup>	HPLC Pheophytin b
Phytin_c	mg/m <sup>3</sup>	HPLC Pheophytin c
Phytyl-chl_c	mg/m <sup>3</sup>	HPLC Phytylated Chlorophyll c
PIC	mg/m <sup>3</sup>	Particulate inorganic carbon
pitch	degrees	Instrument pitch
PO4	mmol/m <sup>3</sup>	Phosphate
POC	mg/m <sup>3</sup>	Particulate organic carbon
PP	mgC/mgchla/hr	Primary productivity
Pras	mg/m <sup>3</sup>	HPLC Prasinoxanthin
pressure	dbar	Water pressure
pressure_atm	mbar	Atmospheric pressure
Pyrophytin_a	mg/m <sup>3</sup>	HPLC Pyropheophytin a
Pyrophytin_b	mg/m <sup>3</sup>	HPLC Pyropheophytin b
Pyrophytin_c	mg/m <sup>3</sup>	HPLC Pyropheophytin c
Q	sr	Eu / Lu (equal to pi in diffuse water)
quality	none	Analyst-specific data quality flag
R	unitless	Irradiance reflectance (Eu / Ed)
RelAz	degrees	Sensor azimuth angle relative to the solar plane
Rf	uW/cm <sup>2</sup> /nm/sr	Raman fluorescence (please use the form Rf_ex###_em###; ex = excitation wavelength; em = emission wavelength)
RI	1/sr	Radiance reflectance (Lu / Ed)
roll	degrees	Instrument roll
Rpi	unitless	Radiance reflectance with pi (pi * Lu / Ed)
Rrs	1/sr	Remote sensing reflectance (Lw / Ed)
sal	PSU	Salinity
sample	none	Sample number
SAZ	degrees	Solar azimuth angle
second	ss	Sample second
SenZ	degrees	Sensor zenith angle
sigma_theta	kg/m <sup>3</sup>	Potential density - 1000 kg/m <sup>3</sup>
sigmaT	kg/m <sup>3</sup>	Density - 1000 kg/m <sup>3</sup>
SiO4	mmol/m <sup>3</sup>	Silicate
Siphn	mg/m <sup>3</sup>	HPLC Siphonein
Siphx	mg/m <sup>3</sup>	HPLC Siphonaxanthin
SN	none	Instrument serial number
SPM	g/L	Total suspended particulate material

SST	degreesC	Sea surface temperature
station	none	Sample station
stimf	volts	Stimulated fluorescence of chlorophyll a
SZ	m	Secchi disk depth
SZA	degrees	Solar zenith angle
tilt	degrees	Instrument tilt
time	hh:mm:ss	Sample time
Tot_Ch1_a	mg/m <sup>3</sup>	HPLC DV_Ch1_a + MV_Ch1_a + Chlide_a + Chl_a_allom + Chl_a_prime
Tpg	mg/m <sup>3</sup>	Total pigment concentration
trans	%	Percent transmission
Vauch	mg/m <sup>3</sup>	HPLC Vaucherixanthin-ester
Viola	mg/m <sup>3</sup>	HPLC Violaxanthin
volfilt	L	Volume filtered
waveht	m	Wave height
wavelength	nm	Wavelength of measurement
wind	m/s	Wind speed
Wt	degreesC	Water temperature
Wvp	cm	Water vapor
year	yyyy	Sample year
Z_90	m	Depth of the first optical layer ( 37% light leve l)
Z_DCM	m	Depth of the deep chlorophyll maximum
Z_Eu	m	Depth of the euphotic layer
Z_MLD	m	Depth of the mixed layer
Zea	mg/m <sup>3</sup>	HPLC Zeaxanthin